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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GAIN, EDWARD F

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 09/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,918

Applicant(s)

MAURO, GEORGE

Examiner

Edward (Skip) Gain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

First Action on the Merits

Quotations of U.S. Code Title 35

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

35 U.S.C. 112, First Paragraph Rejections

1) Claims 11-20 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for storing device processes in device controllers that control operation of process devices, does not reasonably provide enablement for storing device processes in the process devices themselves (claim 11) or for processes devices that indicate to a master controller an indication of the completion of a device step (claim 12). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

35 U.S.C. 112, Second Paragraph Rejections

2) Claims 2-4, 7-9, and 11-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, lines 11-12 and 13, the limitation "the device controllers" lacks antecedent basis. It appears that throughout claims 11-20, the limitation --device controller-- has been mistakenly replaced with the limitation "process device." To expedite prosecution, the examiner will treat claim 11 as if it contained the features found in related apparatus claim 1. For example, based on claim 1, it appears that claim 11, line 6 should recite --storing a device process in device controllers associated with each process device--.

In claim 2, the limitation "for indicating the completion of a device step" lacks antecedent basis and in claim 3, the limitation "for generating a next step execute identifier to the device controllers" lacks antecedent basis. The examiner can not determine what elements these phrases modify. Due to the ambiguities and confusion in claim, no art has been applied thereto, see *In re Steele*, 49 CCPA 1295, 305 F.2d 859, 134 USPQ 292 (1962) and *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). The examiner will not speculate as to the intended meaning.

Claim 4 contains limitations directed to both an apparatus and a method. Since the claim is directed to an apparatus, the method limitation "generating control outputs . . ." lacks antecedent basis. It appears that the semicolon in line 4 should be removed so the claim reads " a step controller . . . for reading a corresponding device step . . .

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and for generating control outputs . . ." To expedite prosecution, the examiner will treat the claim as such.

In claims 7 and 17, the limitations "for indicating the completion of a device step" and "for indicating the completion of a device step by the process device" lack antecedent basis. The examiner can not determine what element these phrases modify. Due to the ambiguities and confusion in claim, no art has been applied thereto, see *In re Steele*, 49 CCPA 1295, 305 F.2d 859, 134 USPQ 292 (1962) and *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). The examiner will not speculate as to the intended meaning.

Claim 8 contains limitations directed to both a method an apparatus. The limitation "providing the device step..." is a method limitation. For examination purposes, the examiner will treat the limitations as if it read -- wherein the master control provides the device step...--.

In claims 9 and 19, the phraseology renders the claim unclear. For example, in claim 9, lines 5-8, the language "is responsive... for generating..." renders the requirements of the claim undeterminable. Additionally, in claim 19, while lines 5-15, appear to recite a number of step, the claim does not explain what performs the steps or how the steps are performed and the claims is not even written as a coherent sentence. Due to the ambiguities and confusion in claim, no art has been applied thereto, see *In re Steele*, 49 CCPA 1295, 305 F.2d 859, 134 USPQ 292 (1962) and *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). The examiner will not speculate as to the intended meaning.

In claim 12, line 3; claim 13, line 5; and claim 14, line 3 it appears that the limitation "process device" is incorrect and should be --device controller--. To expedite prosecution, the examiner will treat the claim as such.

In claim 14, the limitation "for reading a corresponding device step . . ." is incorrect. It appears that the semicolon in line 4 after the word "controller" should be a colon and that the word "for" should be removed. To expedite prosecution, the examiner will treat the claim as such.

In claim 18, line 8, it appears that the limitation "process device" is incorrect and should be --device controller--. To expedite prosecution, the examiner will treat the claim as such.

Rejections Based Primarily On U.S. Patent No. 5,963,444 ("Shidara")

3) Claims 1, 4-6, 8, 10-12, 14-16, 18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,963,444 ("Shidara").

A distributed process control system for control of process devices that are capable of independent operation and of performing operations as cited in **claims 1 and 11** is taught by Shidara. See Figure 3.

A device controller in association with a process device that includes a process step memory for storing a corresponding device process as cited in **claims 1 and 11** is taught by Shidara. See Figure 3.

The device process including one or more device steps that correspond to process steps and controls operation of the associated process as cited in **claim 1 and**

11 is taught by Shidara. See Figure 3 and the PLC "sequence programs" described throughout the specification.

A master controller for generating step execute identifiers to the device controllers where the device controllers respond to the step execute identifiers for cooperatively performing corresponding steps of the device processes as cited in **claim 1 and 11** is taught by Shidara. See Figure 3; column 7, lines 60-67; and column 8, lines 1-42.

The device controller generating and providing to the master controller an indication of the completion of a device step by the process device as cited in **claim 12** is taught by Shidara. See Figure 3, the "machine input data" (Di1) and column 9, lines 3-14.

The device controller having a step controller that responds to the step execute identifier by reading a corresponding device step from its process step memory and that generates control outputs to the process device that correspond to the device step that direct the process device to perform the device step as cited in **claims 4 and 14** is taught by Shidara. See column 8, lines 13-59.

The device steps including a step command that directs an operation to be performed by the process device and a control value that indicates an operating state of the process device in performing the operation as cited in **claims 5 and 15** is taught by Shidara. See column 1, lines 12-27 and column 2, lines 10-22.

The device controller including a device interface for translating the step commands and the control values of each step into control outputs for controlling

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operation of the associated process devices as cited in **claims 6 and 16** is taught by Shidara. See Figure 27.

The master controller including an input device for generating control inputs representing operations of a process device in a device step; a command processor responsive to the control inputs for generating a device step of a device process for a process device; where the master controller provides the device step to the device controller for storage in the process step memory as cited in **claims 8 and 18** is taught by Shidara. See column 7, lines 60-67 and column 8, lines 1-24.

The step execute identifier including a process controller identifiers identifying the process devices that are to execute the process step as cited in **claims 10 and 20** is taught by Shidara. See column 7, lines 60-67 and column 8, lines 1-59.

Rejections Based Primarily On U.S. Patent No. 5,222,017 ("Yellowley")

4) Claims 1, 4-6, 11, 12, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,222,017 ("Yellowley").

A distributed process control system for control of process devices that are capable of independent operation and of performing operations as cited in **claims 1 and 11** is taught by Yellowley. See Figure 1.

A device controller in association with a process device that includes a process step memory for storing a corresponding device process as cited in **claims 1 and 11** is taught by Yellowley. See Figure 1.

The device process including one or more device steps that correspond to

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process steps and controls operation of the associated process as cited in **claims 1 and 11** is taught by Yellowley. See column 3, lines 3-28.

A master controller for generating step execute identifiers to the device controllers where the device controllers respond to the step execute identifiers for cooperatively performing corresponding steps of the device processes as cited in **claims 1 and 11** is taught by Yellowley. See Figure 1 and column 3, lines 11-22.

The device generating and providing to the master controller an indication of the completion of a device step by the process device as cited in **claim 12** is taught by Yellowley. See column 3, lines 29-45.

The device controller having a step controller that responds to the step execute identifier by reading a corresponding device step from its process step memory and that generates control outputs to the process device that correspond to the device step that direct the process device to perform the device step as cited in **claims 4 and 14** is taught by Yellowley. See column 3, lines 10-45.

The device steps including a step command that directs an operation to be performed by the process device and a control value that indicates an operating state of the process device in performing the operation as cited in **claim 5 and 15** is taught by Yellowley. See column 1, lines 10-33.

The device controller including a device interface for translating the step commands and the control values of each step into control outputs for controlling operation of the associated process devices as cite in **claims 6 and 16** is taught by Yellowley. See Figure 1.

Allowable Subject Matter

5) Claim 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 13 is allowable because the prior art of record does not teach or fairly suggest having the master controller generate a "next step execute identifier" in response to each of the process devices completing a device step of its corresponding process and having the master controller send the "next step execute identifier" to the device controllers in combination with the remaining elements and features of the claimed invention. This feature would not have been obvious to one of ordinary skill in the art at the time of the invention because it significantly slows down the operation of processing devices by involving the master control in every step of their corresponding process and because it greatly complicates implementing the control system by making the system very reliant on proper operation of the network and the master controller.

Contact Information

6) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward (Skip) Gain whose telephone number is 703-305-7335. The examiner can normally be reached Monday thru Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, Anil Khatri, can be reached at 703-305-0282. The fax telephone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for official communications, 703-746-7238 for after-final communications, and 703-746-7240 for non-official communication. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Edward (Skip) Gain

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September 11, 2003

Ramesh Patel
RAMESH PATEL
PRIMARY EXAMINER
9/12/03
For Anil Khatri